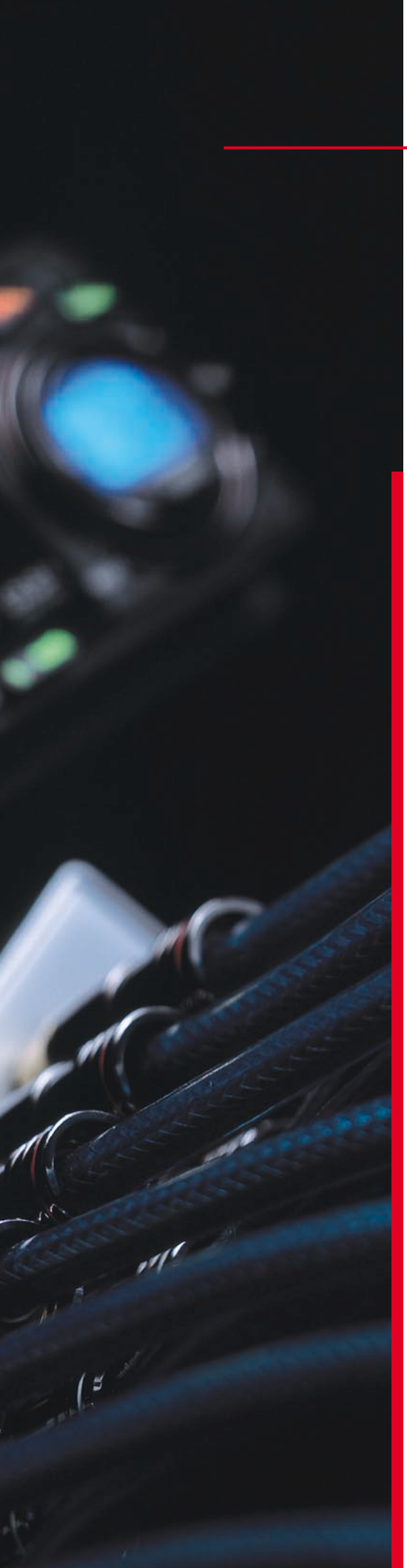
ECLIPSE

by FUJITSU TEN

CD Tuners/Receivers

ESN
DSP
BALANCE-OUT
CUSTOM



CD Tuners/Receivers

AUTO SOUND GRAND PRIX AWARD Audio Video

'02 Product of the Year

E-COM

CD8062

ESN Premium CD Tuner with CDC/E-COM/DSP Control and NOB Remote

E-COM

CD8052

ESN E8 CD Tuner with CDC/E-COM/DSP Control and Remote

E-COM

CD5442

ESN E5 High-Power CD Receiver with CDC/E-COM/DSP Control and Remote

'02 Product of the Year

CD8062

ESN Premium CD Tuner with CDC/E-COM/DSP Control and NOB Remote

The CD8062 is the perfect blend of style, technology and uncompromising quality. The flagship of the ECLIPSE line of compact disc players, the CD8062 incorporates the best of ECLIPSE innovation. The quality of the CD8062 is evident in the detail of its design. The stylish, ergonomically efficient face puts every function at your fingertip control. Inside, a high-sensitivity integrated optics pickup and digital servo system ensures precise tracking and accurate reproduction of your music – whether it's on a CD, CD-R or even a CD-RW. The unique technology of the STARTUNER®V locks on to radio stations to deliver crystal-clear entertainment. The true innovation of the CD8062 is found in its high-end audio signal delivery design. The synergistic combination of the preamp's high voltage output signal at low impedance and balanced line outputs maximizes audio performance and eliminates possible signal degradation. Combined with the 37601 Balanced Line Adapter, the CD8062 will exceed your expectations.

Quality to Please the Critical Audiophile

- **Balanced outputs**
- **High voltage & low impedance pre-amp output (balanced output:16V unbalanced output: 8V)**
- **Free-flow signal circuit**
- **Copper-shielded chassis**
- **Smart electronics control**
- **Quality components**
- **Gold-plated audio connectors**
- **Whole/partial/none display selector**
- **Independent bass/mid/treble memory for each source**

User Friendly Customization & Operational Ease

- **Flexible on-board memory (for AM/FM preset and CD title)**
- **Auxiliary Input for MP3 player**
- **Head unit dimmer settings (3 levels each for day and night)**
- **Customizable messages (30 characters × 5 patterns)**
- **ECLIPSE COMMANDER-ready**
- **Intelligent NOB & NOB rotary encoder**

Security & System Expandability

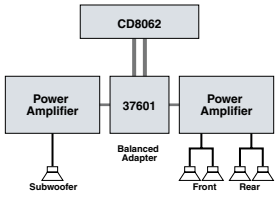
- **ESN (ECLIPSE Security Network)**
- **Full utilization of subwoofer capability**
- **Electronic crossover control**

BALANCED LINE ADAPTER

37601

Balanced Line Adapter

The 37601 Balanced Line Adapter enables an amplifier to take full advantage of the ideal signal offered by the balanced line outputs of the CD8062. Equipped with innovative noise rejection technology that reads the dual audio signals of a balanced line output, the 37601 "filters out" noise from the system, delivering only a pure audio signal to the amplifier.



Specifications

Supply Voltage	13.8V DC (10.8 ~ 15.6V)
Current Consumption	Approx. 0.25A max
Frequency Response	20 ~30.000Hz, ±2dB
Distortion	0.005% (1Hz, 1V)
S/N Ratio	106dB (IHF-A network)
Input Impedance	12kΩ
Output Impedance	220Ω
Max. Output Voltage	10V (1kHz)
Common Mode Rejection	60dB (1kHz)
Dimensions (W × H × D)	6.14˝ × 1.50˝ × 1.97˝ (156 × 38 × 50mm)
Weight	0.72lbs (0.33kg)

CD8052

ESN E8 CD Tuner with CDC/E-COM/DSP Control and Remote

CD5442

ESN E5 High-Power CD Receiver with CDC/E-COM/DSP Control and Remote

CD3432

ESN E3 High-Power CD Receiver with CDC E-COM/DSP Control and Remote

CD3422

ESN E3 High-Power CD Receiver with CDC/E-COM Control

CD3412

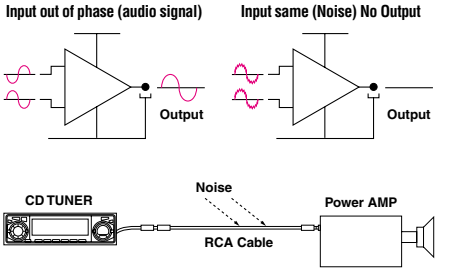
ESN E3 High-Power CD Receiver with CDC Control

CD3402

ESN E3 High-Power CD Receiver

The Balanced Audio Delivery System

In professional audio the preferred method of sending an audio signal from one component to another is balanced audio delivery. Balanced line outputs virtually eliminate the possibility of noise in an audio system. "Noise" is defined as electrostatic interference, usually radiated from wires and cables or other components which can filter into a sound system and degrade audio quality. Compared to standard audio cable, which carries noise along with the audio signal to the amplifier, a balanced output uses two oppositely-polarized wires to carry the audio signal. If noise is introduced into the system, it will appear on both audio signals. At the receiving end is a special "Balanced Line Adapter." This "Balanced Line Adapter" effectively cancels out the noise and sends only the audio signal to the amplifier.



Audio Features

- **Balanced outputs** provide reference-quality audio signals to the amplifier system (CD8062).
- **High voltage & low impedance pre-amp outputs** deliver a pure, strong signal to the amplifier for noise-free sound reproduction.
  CD8062: 16V (balanced output)
  8V (unbalanced output)
  CD8052: 8V, 55Ω CD5442:5V, 100Ω
  (CD3432/CD3422/CD3412/CD3402: 2.7V, 330Ω)
- **High-sensitivity integrated optics pickup** delivers an output signal optimized for higher audio performance whether source is CD, CD-R, or CD-RW.

- **New chips utilized in the integrated pickup circuit** boost signal voltage to achieve better S/N.

- **A digital servo system** reads CD surface variations and adjusts for accurate tracking.
- **An 8-times oversampling digital filter** and **dual 1-bit digital-to-analog converters** give you maximum sonic quality from your CDs.
- **A shock-resistant, oil-damped mechanism** carefully isolates the laser pickup from the disc mechanism for optimum laser tracking.
- **The STARTUNER® V** locks onto your selected station and rejects local distortion.
- **A free-flow signal circuit** with 70-micron copper traces resists noise and signal degradation (CD8062).
- **The high-quality copper-shielded chassis** prevents electrical noise from entering the audio signal (CD8062).
- **Smart electronics control**
  Audio controls such as volume, Bass/(Mid)/Treble, Balance, Fader and Non-fader Level/Phase controls for the subwoofer now have been successfully integrated on a single chip, minimizing signal processing and improving S/N ratio while ensuring smooth, precise level setting changes.
- **Quality components** ensure optional sound performance the way the unit was intended to (CD8062).
- **High-power internal amplifier** CD5442/CD3432/CD3422/CD3412/CD3402
- **Corrosion-resistant gold-plated audio connectors** deliver the highest-quality audio signals to the amplifier (CD8062).

Ergonomic Features

User-Friendly Customization

- **Flexible on-board memory** (for AM/FM preset and CD title) (CD8062/CD8052/CD5442)
- **Auxiliary input** to connect a separate audio source (MP3 player etc.) (CD8062/CD8052/CD5442/CD3432/CD3422)
- Head Unit Dimmer Settings (3 levels each for day & night) (CD8062/CD8052/CD5442)
- Customizable Messages (30 characters × 5 patterns) (CD8062/CD8052/CD5442)

Operational Ease & Enhanced Visibility

E-COM

- **ECLIPSE COMMANDER-ready** for the ultimate in voice-command control and convenience (CD8062/CD8052/CD5442/CD3432/CD3422).
- **Intelligent NOB** simplifies audio control and settings (CD8062/CD8052/CD5442/CD3432/CD3422).

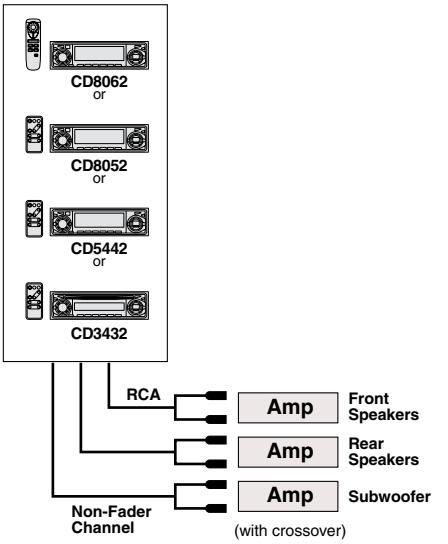
- **NOB Rotary Encoder**

- **The 1802 NOB remote control** (included) accesses all functions from any seat in the vehicle (CD8062).
- **Mini Remote** (included) fits on steering wheel for operation without distraction when driving (CD8052)

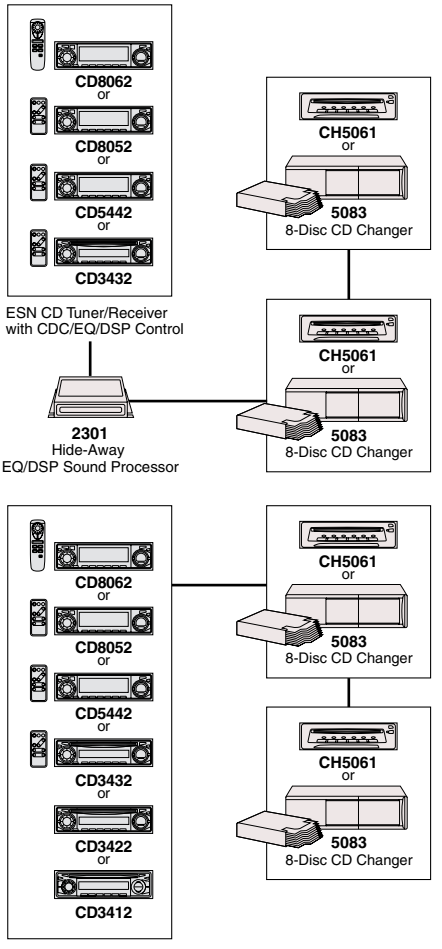
- **Independent bass/mid/treble memory for each source** (CD8062/CD8052/CD5442)
- The high-visibility **VF & LCD display** assure instant visual checks.
- **The motorized tilting display** provides a perfect viewing angle (CD8062/CD8052/CD5442).
- **Cellular telephone mute**
- **CD text-ready** (CD8062/CD8052/CD5442)

System Expandability

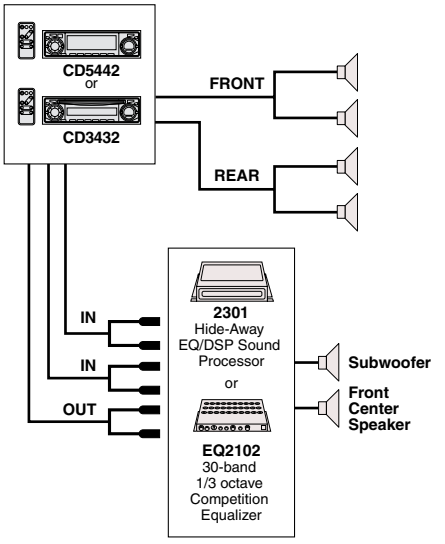
- **Full utilization of subwoofer capability** (CD8062/CD8052/CD5442/CD3432/CD3422)
  One pair of the 3 pairs of RCA pre-amp terminals provided may be used for listener-selected subwoofer control settings. This is a full range output designed to be directly connected to your subwoofer amplifier, which allows control of the subwoofer level and phase directly from the NOB rotary encoder on the ECLIPSE CD Tuners/Receivers. The subwoofer output is non-fading.
- **Electronic crossover control** allows you to set the high pass filter and low pass filter for the subwoofer system (CD8062/CD8052/CD5442/CD3432).



- **CD changer control with daisychain capability & equalizer/DSP sound processor control**
  The ECLIPSE CD8062/CD8052/CD5442/CD3432/CD3422/CD3412 facilitates convenient and user-friendly control of the 5083/CH5061 CD Changer, with daisychain capability.
  In addition, the CD8062/CD8052/CD5442/CD3432 controls the 2301 Equalizer/DSP Sound Processor, which enables you to create your own soundfield in your car.



- **The E-LAN data link system** allows the addition of multiple ECLIPSE components through a single cable (CD8062/CD8052/CD5442/CD3432/CD3422/CD3412).
- **Selectable (in/out) RCA terminals for DSP sound processor loop**
  Three pairs (Front/Rear/Subwoofer) of RCA pre-amp terminals are provided, for switchable all-OUT or 2-pair IN & 1-pair OUT operation. This unique feature allows the use of a DSP sound processor without requiring external amplifiers.



Security

- **The ECLIPSE Security Network (ESN)** disables the unit if it is removed from the vehicle.

REMOTE CONTROL

1802

NOB Remote

The 1802 NOB Remote Control may be used with the 55090, 56050, CD8062, CD8052, CD5442, CD3432, CD3422, 4502 and 4441 models.

1802 is provided as standard equipment on the CD8062 models.

Some of the functions on the 56050, CD5442, CD3432, CD3422, 4502 and 4441 models cannot be operated from the 1802.

1602

Wireless Remote

The 1602 Wireless Remote Control may be used with the 7301,AV5101,55090, 56050, CD8062, CD8052, CD5442, CD3432, CD3422, 4502 and 4441 models.

1602 is provided as standard equipment on the 7301, AV5101, 56050, CD8052, CD5442, CD3432 and 4502 models.

Features

DSP Sound Processor Control
(CD8062/CD8052/CD5442/CD3432)

- DSP On/Off
- Simplified DSP Operation
- Factory Presets (5 Venues: Concert Hall/ Live Music House/Cathedral/Stadium/Club)
- Sound Level/Time Adjustment for Early Reflection/Late Reflection
- 6 User-Memory Presets
- Digital Surround Control (Only when connected to 39011) (CD8062/CD8052/CD5442)

Equalizer Control
(CH8062/CD8052/CD5442/CD3432)

- 6 Factory-Presets
- 6 User-Presets
- 7-Band Control

NOB Remote Controller (CD8062)

Wireless Remote Controller
(CD8052/CD5442/CD3432)

- ECLIPSE COMMANDER
- CD On/CD Changer On/Disc Up & Down/ Track Up & Down/Fast Up & Down
- Disc Up & Down/Track Up & Down/ Fast Up & Down
- Tuner On/AM-FM Selector/Seek/Manual Tune/ Preset Channel Up & Down
- Volume Up/Down
- Mute
- Power On/Off

Remote Control Ready Option
(CD3422)

Single CD

- CD-R/CD-RW
- CD Text Display (CD8062/CD8052/CD5442)
- Track Scan
- Track Up/Down
- Fast Up/Down
- Repeat
- Random Play
- CD Title Input & Display (CD8062/CD8052/ CD5442)
- Music Genre Display (CD3432)
- Pause/Play (CD8062/CD8052/CD5442)

CD Changer Control
(CD8062/CD8052/CD5442/CD3432/CD3422/CD3412)

- Disc Direct Access
- Disc Up/Down
- Track Up/Down
- Track/Disc Scan
- Track/Disc Random Play
- Fast Up/Down
- Track/Disc Repeat
- Daisychainable
- CD Name Preset (CD8062/CD8052/CD5442)
- Music Genre Display (CD3432)

Tuner

- PLL Frequency Synthesized Electronic Tuner
- ECLIPSE STARTUNER® V for Superior FM Reception
  - Advanced Keyed-AGC
  - ASC (Automatic Separation Control)
  - ATC (Automatic Tone Control)
  - Soft Mute Circuitry
  - RF AGC Amp Circuit
  - Dual Gate MOS FET
  - Balanced Mixer IC
  - 3 Special Ceramic Filters
  - FM Noise Blanker
- Band Category Input
- Station ID Input (for displaying station name)
- ASM (Auto Station Memory)
- Up/Down Auto Seek
- 24 Station Presets (18FM/6AM)
- Preset Scan
- Automatic Local/Distant Seek Sensitivity
- One-Touch Station Memory

Audio

- Balanced High Voltage 16V (CD8062) (Unbalanced: 8V)
- 8V High Voltage (CD8052)
- 5V High Voltage (CD5442)
- 55Ω Low Impedance Pre-Amp Out (CD8062/CD8052)
- 100Ω Low Impedance Pre-Amp Out (CD5442)
- 13W × 4 (20 ~ 20,000Hz, 0.8% THD, 4Ω) (CD5442/CD3432/CD3422/CD3412/CD3402)
- Independent Bass/Mid/Treble Memory for each Source (CD8062/CD8052/CD5442)
- Independent Bass/Treble Memory for each Source (CD3432/CD3422/CD3412/CD3402)
- Balance Control
- Fader & Pre-Amp Fader Control
- Non-Fader Level/Phase Control for Subwoofer (CD8062/CD8052/CD5442/CD3432/CD3422)
- Loudness Switch
- Mute
- 3 Pairs of RCA Pre-Amp Terminals (CD8062/CD8052/CD5442/CD3432/CD3422)
  - Non-Fading RCA Pre-Out Terminals
  - 2-Channel Selectable (IN/OUT) RCA Terminals (CD5442/CD3432/CD3422)
- 2 Pairs of RCA Pre-Amp Terminals (CD3412/ CD3402)
- 3 Pairs of Gold-Plated RCA Pre-Amp Terminals (CD8062)
- Free-Flow Signal Circuit (CD8062)
- Copper-Shielded Chassis (CD8062)
- Quality Components (CD8062)
- Flexible onboard memory
- Auxiliary Input (CD8062/CD8052/CD5442/ CD3432/CD3422)
- Electronic Crossover Control (CD8062/CD8052/ CD5442/CD3432)
- Smart Electronic Control (CD8062/CD8052/ CD5442/CD3432/CD3422)

General

- ESN (ECLIPSE Security Network)
- Intelligent NOB (CD8062/CD8052/CD5442/ CD3432/CD3422)
- NOB Rotary Volume Encoder
- VF Display (CD8062/CD8052/CD5442)
- LCD Display (CD3432/CD3422/CD3412/CD3402)
- Whole/Partial/None Display Selector (CD8062/CD8052/CD5442)
- ECLIPSE COMMANDER Ready (CD8062/CD8052/CD5442/CD3432/CD3422)
- Tilting Front Panel (CD8062/CD8052/CD5442)
- Spectrum Analyzer (CD8062/CD8052/CD5442)
- Customizable Messages(30 character × 6 patterns) (CD8062/CD8052/CD5442)
- ECLIPSE LAN (E-LAN) (CD8062/CD8052/CD5442/CD3432/CD3422/ CD3412)
- Cellular Telephone Mute System (Active Low)
- Clock
- DIN Installation Compatible
- Power Antenna Activator
- Head Unit dimmer settings (3 levels each for day and night) (CD8062/CD8052/CD5442)
- LCD Contrast Control (CD3432/CD3422)

Feature List

	CD8062	CD8052	CD5442	CD3432	CD3422	CD3412	CD3402
CONTROL							
DSP Sound Processor Control	●	●	●	●	—	—	—
Digital Surround Control	●	●	●	—	—	—	—
Equalizer Control	●	●	●	●	—	—	—
Remote Control	●	●	●	●	Optional	—	—
CD Changer Control (Daisychainable)	●	●	●	●	●	●	—
CD							
CD-R/CD-RW	●	●	●	●	●	CD-R	CD-R
Digital Servo System (DSS)	●	●	●	●	●	●	●
Integrated Optics Pick-Up	High-Sensitive	High-Sensitive	High-Sensitive	High-Sensitive	High-Sensitive	●	●
8-Times Oversampling Digital Filter	●	●	●	●	●	●	●
Dual 1-Bit D/A Converter	●	●	●	●	●	●	●
The ECLIPSE Memory Buffer	●	●	●	●	●	—	—
CD Text Display	●	●	●	—	—	—	—
CD Name Preset	●	●	●	—	—	—	—
TUNER							
STARTUNER®	V	V	V	V	V	V	V
Band Category Input	●	●	●	—	—	—	—
Station ID Input (for displaying station name)	●	●	●	—	—	—	—
AUDIO							
High Voltage Output	8V/16V	8V	5V	2.7V	2.7V	2.7V	2.7V
High Power Internal Amplifier	—	—	●	●	●	●	●
Balanced Out	●	—	—	—	—	—	—
Independent Bass/Mid/Treble Memory for each Source	●	●	●	—	—	—	—
Independent Bass/Treble Memory for each Source	—	—	—	●	●	●	●
Non-Fader Level/Phase Control for Subwoofer	●	●	●	●	●	—	—
Selectable IN/OUT RCA Terminals	—	—	●	●	●	—	—
3 Pairs of Gold-Plated RCA Terminals	●	—	—	—	—	—	—
3 Pairs of RCA Pre-Amp Terminals	—	●	●	●	●	—	—
2 Pairs of RCA Pre-Amp Terminals	—	—	—	—	—	●	●
Free-Flow Signal Circuit	●	—	—	—	—	—	—
Quality Components	●	—	—	—	—	—	—
Copper-Shielded Chassis	●	—	—	—	—	—	—
Flexible onboard memory	●	●	●	—	—	—	—
Auxiliary Input	●	●	●	●	●	—	—
Electronic Crossover Control	●	●	●	●	—	—	—
Smart Electronic Control	●	●	●	●	●	—	—
Last Audio Model Memory	●	●	●	●	●	●	●
GENERAL							
ESN	●	●	●	●	●	●	●
Display	VF	VF	VF	LCD	LCD	LCD	LCD
Whole/Partial/None Display Selector	●	●	●	—	—	—	—
ECLIPSE Commander Ready	●	●	●	●	●	—	—
ECLIPSE LAN Advanced Data Link System	●	●	●	●	●	●	—
Spectrum Analyzer	●	●	●	—	—	—	—
Head Unit Dimmer Settings	●	●	●	—	—	—	—
Customizable Messages	●	●	●	—	—	—	—
Intelligent NOB	●	●	●	●	●	—	—
NOB Rotary Encoder	●	●	●	●	●	●	●
LCD Contrast Control	—	—	—	●	●	—	—

Specifications

GENERAL						
Power Supply	14.4V DC (11 ~ 16V)					
Current Drain	2A		3A			
Dimensions (W × H × D)	7˝ × 2˝ × 6-1/8˝ (178 × 50 × 155mm)					
FM TUNER						
Frequency Range	87.75 ~ 107.9MHz (200kHz step)					
Usable Sensitivity	13dBf					
Frequency Response	30 ~ 15,000Hz, ±3dB					
Stereo Separation	38dB (1kHz)					
AM TUNER						
Frequency Range	530 ~ 1,710kHz (10kHz step)					
Usable Sensitivity	20μV					
CD SECTION						
Frequency Response	20 ~ 20,000Hz, ±3dB					
Wow & Flutter	Below measurable limits					
Stereo Separation	73dB				68dB	
S/N Ratio (A-weighted)	96dB				90dB	
Dynamic Range	95dB				89dB	
Total Harmonic Distortion	0.03%				0.04%	
AUDIO AMPLIFIER						
Power Output	—		13W × 4 (20 ~ 20,000Hz, 0.8% THD, 4Ω) Max. 50W × 4	13W × 4 (20 ~ 20,000Hz, 0.8% THD, 4Ω) Max. 45W × 4	13W × 4 (20 ~ 20,000Hz, 0.8% THD, 4Ω) Max. 35W × 4	
Output Level (0dB CD) /Impedance	Balanced output: 16V Unbalanced output: 8V 55Ω line-out impedance	8V 55Ω line-out impedance	5V 100Ω line-out impedance	2.7V 330Ω line-out impedance		
Tone Action	Bass: ±10dB at 60Hz/Mid:±10dB at 600Hz Treble: ±10dB at 10kHz			Bass: ±10dB at 100Hz Treble: ±10dB at 10kHz		
Loudness	+10dB at 100Hz/+6dB at 10kHz				+10dB at 100Hz/+6.5dB at 10kHz	